DOCUMENT RESUME

ED 280 410 HE 020 261

AUTHOR Hawk, Thomas R.; Grosset, Jane M.
TITLE A Formative Program Evaluation Strategy for Producing Institutional Change. A Case Study of a Large General Studies Program Evaluation in an Urban Community College. AIR 1986 Annual Forum Paper.
PUB DATE Jun 86
NOTE 37p.; Paper presented at the Annual Forum of the Association for Institutional Research (26th, Orlando, FL, June 22-25, 1986).
PUB TYPE Reports - Evaluative/Feasibility (142) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Advising; Academic Aspiration; *Change Strategies; Community Colleges; Educational Objectives; *Formative Evaluation; *General Education; Higher Education; *Program Evaluation; Program Improvement; *Student Characteristics; Student Needs; Student Placement; *Two Year College Students; Urban Schools
IDENTIFIERS *AIR Forum

ABSTRACT

A formative evaluation was undertaken at an urban community college to determine how an open-admission general studies program should be restructured to better meet student goals and the college's educational objectives. The evaluation process included: interviewing key college representatives to generate hypotheses, and review of the hypotheses by a broad representation of institutional contituents. The research plan focused on: a data collection and analyses technique that would describe the performances and outcomes of the general studies students, and an approach to identify subpopulations within the general studies student pool, as well as discriminating variables associated with each subpopulation. The identification of five student subpopulations made it possible to target support services to new general studies students. The research results have implications for academic advising and support services and curricular requirements. An approach for compiling and disseminating the results was developed. The five subpopulations are described and the discriminating variables are listed. Nine principles for producing institutional change through a formative evaluation are also considered. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED280410

A FORMATIVE PROGRAM EVALUATION STRATEGY FOR PRODUCING INSTITUTIONAL CHANGE

A Case Study of a Large General Studies Program Evaluation in an Urban Community College

Thomas R. Hawk
Jane M. Grosset

Community College of Philadelphia

June 23, 1986

Presented at the Association for Institutional Research 26th Annual Forum in Orlando, Florida, June 22-25, 1986

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

AIR

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

HE 020 281

for Management Research, Policy Analysis, and Planning

This paper was presented at the Twenty-Sixth Annual Forum of the Association for Institutional Research held at the Marriott Orlando World Center, Orlando, Florida, June 22-25, 1986. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

Ann K. Dickey, Chair
Forum Publications Editorial
Advisory Committee

Formative program evaluations are undertaken to ".... influence decision-making and action on policy, resource allocation, and program operation." (McClintock, 1984) Formative evaluations are intended to provide a basis for understanding possible approaches to programmatic improvement, i.e., moving toward a closer congruence between program goals and outcomes. A formative evaluation process can serve as a vehicle for institutional change. To accomplish this, the formative evaluation must, in some sense, eliminate the barriers to programmatic change that exist within the institution. Barriers can relate to lack of information and/or to inertia caused by institutional decision-making practices. This paper describes a formative evaluation process that was undertaken to break a multi-year institutional deadlock on the issue of how a large General Studies Program should be restructured to better meet student goals and institutional expectations for students' educational achievements.

The program at issue in this research effort was an open-admission, two-year degree program. The General Studies Degree was initiated in 1969 as an exit degree in response to student and faculty concerns at the time that existing programs' graduation requirements were too restrictive. The degree designation was quickly adopted by students and faculty as a de facto program option, and within two years had become the

College's largest "major". By the 1983-84 academic year, most College staff had become disenchanted with the program and were informally arguing for its modification. But change was complicated by the fact that no academic division had direct responsibility for the program, and by institutional politics which produced self-serving recommendations for change. The College-wide Curriculum Committee had failed in a lengthy deliberation to reach a consensus on how to revise the program.

The urgency of restructuring the program was emphasized by findings regarding the outcomes of students enrolled in the curriculum. Retention rates in the program were lower than for other curricula, as were students' grade point averages (GPA's). Prior research on the General Studies students had revealed that upon either transferring or entering the labor market, they tended to be less successful than students from other programs. However, existing research was not adequate to identify what changes to the program would be most helpful to eliminate the deficiencies in outcomes.

A formative program evaluation was proposed by the authors to accomplish several objectives: identify the extent to which students who were enrolled in the program were failing to achieve their educational goals and what institutional characteristics were contributing to this failure; determine the extent to which students in the program were failing to receive an educational experience consistent with the College's expectations for general education and curriculum coherence; and finally, create a basis for consensus on the appropriate directions to take in

restructuring the program. Thus, the audit had two major purposes: to determine how the program should be restructured to meet student and institutional goals, and to provide a way for overcoming institutional inertia to change the program.

Unlike other programs offered by the College, there did not exist a clear statement of goals for the General Studies program. This circumstance reflected the manner in which the program had come into existence and the subsequent lack of ownership for the program. Still, the evaluation effort had to be based upon some assumptions about intended program purposes and outcomes. Given the absence of program goals, the evaluation had to be based upon other criteria, including the College's general education goals for all curricula and the students' goals at the time of enrolling in the curricula. The expectation was that clearer, more structured program goals would be developed based upon the findings of the audit.

The research process described below took some liberties in the design and presentation of the study. It was the contention of the authors that a more traditional approach to the research effort would have failed to achieve the basis for institutional change. The latter portion of the paper describes the principles which the authors believe are important to conducting an institutional research effort resulting in institutional change, and relates these to suggestions of other researchers on ways to increase the utilization of research findings.

METHODOLOGY

Hypothesis Formation - Identification of Critical Issues

Because of the size of the program, which at the time of this research enrolled over 5000 students, almost all professional staff at the College had had significant exposure to the General Studies student population and had formed opinions about the nature of the problems associated with the program. However, many staff members' perceptions appeared to be based upon exposure to a set of students who were not necessarily typical of the entire population. Thus, some staff saw the General Studies students primarily as goal-oriented, self-directed adults, while others portrayed them as immature, recent high school graduates with no clear educational or career goals. Still others argued that there were relatively few true General Studies students and that students were enrolled in the program largely as a result of administrative incompetence - a failure to correctly identify appropriate program designations at the time the student registered or was advised.

To begin to organize institutional perceptions in a way that meaningful research hypotheses could be developed, a series of in-depth interviews were undertaken with key institutional representatives. These individuals were believed to be most informed about the nature of the General Studies students, and were also believed to be influential in institutional decision making. To prepare for these interviews, a synopsis of findings

on the General Studies students collected in previous research studies was prepared and distributed to those who were to be interviewed. This gave the interviewees a factual background as well as their own experiences to consider as they discussed the General Studies students with the researchers.

Individuals interviewed were asked to do the following:

1) Describe the reasons they believed that students selected or were placed in the General Studies Program.
2) Describe the types of educational and career goals that they believed were held by the General Studies students.
3) Describe their perceptions of the strengths and weaknesses of the current General Studies Program.
4) Suggest research questions (critical issues) which they believed should be addressed in the evaluation effort.

Based upon these interviews, a series of hypotheses were developed which, once endorsed, would provide the framework for structuring the audit. The hypotheses included the following:

A. After controlling for entering ability, the academic performance of General Studies students was lower as measured by GPA and attrition measures.

B. General Studies students were less likely to accomplish entering goals than students in other programs offered by the College.

C. Many students placed in the General Studies Program would have preferred to have been in another program.

D. The transfer experiences of former General Studies students as measured by acceptance and course transfer rates, and transfer-institution GPA's were less satisfactory than those for other students.

E. General Studies students were more likely to have had difficulty finding jobs and less likely to report having employment related to program of study at the College.

F. General Studies students were less likely to have used support services such as counseling, tutoring and job placement.

G. General Studies students were less likely to have been satisfied with their educational experiences at the College than other students at the College.

H. General Studies students were less likely to enroll in second-level courses than students in other programs.

I. General Studies students were not a homogeneous group based upon entering goals and reasons for being enrolled in the program. General Studies students could be broken into five distinct subpopulations:

- Goal-directed, career-oriented students
- Goal-directed, transfer-oriented students
- Unclear-goal, academically competent students
- Unclear-goal, academically incompetent students
- Aspiring selective-program students

J. A priori variables existed which could be used to identify into which of the above subpopulations a student was most likely to fall at the time the student was being counseled and registered for the first term.

The formation of the hypotheses to suggest that General Studies students were generally less successful than other students at the College reflected earlier research findings and was consistent with the profile that emerged from the initial interviews. The last two hypotheses were the most important for institutional change strategies. If differing subpopulations, with presumably different needs for educational and student-service support existed, and if these student groups could be identified upon, or shortly after, initial enrollment, then it was believed that student performance with respect to retention,

GPA and post-college outcomes could be improved by developing appropriate curricular and support service structures.

The hypotheses were shared with a broad representation of institutional constituents who were asked to identify other issues which they felt should be included in the research plan. There was general support for the proposed research hypotheses. However, many faculty and academic administrators felt that more attention should be focused on the course selection patterns used by General Studies students. A common belief was that the declines in student enrollments in a number of disciplines, most notably the humanities and social sciences, could be attributed to changing course selection patterns of the General Studies students. There were two major concerns: that the lack of specific discipline requirements resulted in some disciplines being totally ignored by most General Studies students, and that the loss of enrollments in second-level courses reflected an increasing tendency for General Studies students to enroll in only first-year courses. These latter concerns were at the heart of why the institution had failed to reach consensus on appropriate strategies to restructure the program. Curriculum reform issues were inevitably caught up in faculty teaching preferences and job security issues.

To test the hypotheses proposing the existence of General Studies student subpopulations, likely characteristics of each group were developed. These were in the following areas:

- entering goal clarity
- course selection patterns
- course withdrawal rates

- admissions placement test performance
- academic performance
- timing of registration ("on-time" or "late")
- program preferences at time of entry
- prior academic experiences

For each of the proposed General Studies subpopulations, one or more variables were defined for each of these characteristics. The proposed characteristics for each subpopulation were reviewed by the institutional representatives who had been involved in the original interviews. Their suggestions were included in the creation of the final variable list.

Research Plan

The involvement of a wide range of institutional constituents in the formation of the research hypotheses had provided an important opportunity for staff to look at the program from an institutional as opposed to a discipline or work-unit perspective. It was equally important that College staff endorse the research plan so that the results of the evaluation would not be rejected as a result of not understanding or disagreeing with the research methodology.

To this end, a research team composed of representative College professionals was convened. The role of this group was to review and suggest research strategies to address the study hypotheses, and to assist in the interpretations and explanations of results. This group did not relieve the authors of the primary responsibility for conducting the research and presenting the results - but it did provide a vehicle for helping to insure

that the methodology and findings were presented in ways that non-research-oriented professionals in the College could understand and accept.

A second component of the research plan was to involve a number of staff directly in the research tasks to provide them with first-hand information on the findings to encourage an interest in using the results. Part B of the research plan created this involvement.

The research plan had two major parts:

A. Description of an overall data collection and analyses technique designed to describe the performances and outcomes of the General Studies students.

B. Definition of an approach to confirm the existence of recognizable subpopulations within the General Studies student pool and description of a methodology to describe discriminating variables associated with each subpopulation. If the subpopulations existed, then the research was to identify institutional factors which contributed to the relative success (or lack thereof) by students in the subpopulation.

The first part of the research plan was routine. A combination of descriptive and inferential multi-variate statistics were to be used to identify significant differences in the General Studies students' outcomes from those of other students. In looking at differences, intervening factors such as entering abilities, educational goals, full-time versus part-time

status, race and sex were considered. Outcome variables examined included GPA, retention rates, course withdrawal rates, acceptance at four-year colleges, percentage credits transferred to four-year colleges, employment status and employment related to field of study. In addition, variables related to students' satisfaction with their educational experiences at the College were collected. Course selection patterns were examined by using the Student Data Module (SDM) developed by the National Center for Higher Education Management Systems (NCHEMS).

While the data on student outcomes for the General Studies population as a whole was expected to reveal some important relationships, it was anticipated that such data assembled for the various hypothesized subpopulations would be far more useful for identifying needed changes to the General Studies Program.

The following approach was developed to determine the existence of the proposed subpopulations. A random sample of 450 General Studies students was selected broken down into two categories: 350 students who had completed at least 24 credits and 100 who had completed less than 12 credits. For each student, a portfolio of information was assembled which included, to the extent possible:

- Transcripts which indicated course and course grades, all course withdrawals, "stopping-out" patterns, curriculum changes, GPA and academic standing by term;
- Admissions data which included high school information including high school type, class rank, course selections and grades;

- Personal information including limited information on socio-economic background, and admissions placement test data;
- Miscellaneous data which included entering goals, timing of decision to register and, for some students, counseling notes.

An expected profile for students in each of the hypothesized subpopulations was developed.

To determine if the General Studies students could be divided into the five subpopulations, a group of thirty volunteers from the counseling, administrative and teaching staffs was convened. This group was briefed in detail on the hypothesized subpopulations and related characteristics. The portfolios for the students were divided up among the participants. Two independent judgements on the subpopulation to which each student belonged were made. In cases of disagreement, which occurred in approximately 25% of the cases, a third participant reviewed the portfolio without being told of the prior two rankings. This tie-breaking approach resulted in all but ten students being classified. The classification activity was done in one location at one time to provide consistent conditions for the activity and to insure that technical assistance was available to explain information in the student portfolios.

A major benefit of this activity was that a reasonably large representative group of the College's professional staff took an

in-depth look at the academic performance of the General Studies students and saw first-hand the difficulties many students were encountering within the current curriculum structure. Participants in this classification activity became some of the strong proponents for reform to the curriculum.

At the time the research plan was developed it was not clear how accurate the classifications ~~were~~ would be. To validate the findings, a phone follow-up of all students in the sample was planned. The purpose of the follow-up was to clarify impressions developed from reading the student portfolios and to gather additional information on reasons for enrolling, experiences to date at the College and, where appropriate, outcomes data for each of the students.

The final portion of this part of the research effort was to see if membership in a subpopulation could be predicted with reasonable reliability using only the student variables that were available as a result of the admissions and initial counseling and advising procedures. Using subpopulation membership as established by the prior research efforts, discriminant analyses were undertaken to see which, if any, a priori variables would be most helpful to categorize the students into the correct subpopulation as they entered the College.

RESEARCH FINDINGS

It is not the purpose of this paper to describe the research findings in detail. However, a brief summary of major findings will help to explain the restructuring of the General Studies Program that resulted from the audit and the implications of the research methodology for institutional change.

Major findings included the following:

1. Five distinct populations of General Studies students did exist. These subpopulations were consistent with those that had been intuitively described by professionals at the College. The projected percentage of students in each category was:

Category	Percent of General Studies Students
Group A: Goal-Directed, Academically Able, Career-Oriented	19%
Group B: Goal-Directed, Academically Able, Transfer-Oriented	20%
Group C: Options Exploring, Academically Able	24%
Group D: Unclear Goals, Academically Floundering	26%
Group E: Aspiring Selective Program	11%

Brief descriptions of each group as developed from the study findings are shown in Figure 1.

2. Using a Discriminant Analysis approach and employing only variables available at the time the student entered

FIGURE I

BRIEF DESCRIPTIONS OF THE FIVE GENERAL STUDIES STUDENT SUBPOPULATIONS

Goal-Directed, Career-Oriented Students. These students have academic abilities such that they can succeed in the College's courses without unusual support services. These students may or may not intend to earn a degree at CCP. Some enroll to take only a limited number of courses to enhance their current career.

Goal-Directed, Academically Able, Transfer-Oriented Students. These students are similar to those above except that the students are transfer-oriented. Some students in this group reverse transfer on leave from a four-year college, or are students who are eliminating deficiencies in their educational background in order to be admitted to a professional school.

Options Exploring, Academically Able Students. This type of student enrolls with a solid educational background and is able to complete successfully college-level studies. The student is unclear as to his/her educational goals and/or may have changed goals on at least one occasion. Student may be ambivalent about degree goals and future enrollment plans. This category of student withdraws from a high percentage of courses and has a high probability of not enrolling at all for some semesters. Course selections tend to vary greatly from semester to semester. The student tends to need strong directive counseling and advising support, and assistance in goals clarification.

Unclear Goals, Academically Floundering Student. Students in this category tend to have entering academic skills that are marginally adequate to begin college-level studies and/or have a deep-seated ambivalence about their educational goals. Their performance is characterized by high withdrawals and low grades. Course selection patterns tend to be erratic and inappropriate. Students in this category are very unlikely to graduate. In order to succeed, students in this category appear to need strong directive advising and counseling assistance with goals development and academic support services to assist them in strengthening their academic abilities.

Aspiring Selective Program Students. Students in this category hope to be admitted into a competitive-admissions program. Students tend to have a mediocre high school record and/or have failed to take high school work in the mathematics or science areas. Students tend to take courses that are required or prerequisites for a particular program. Courses are repeated with a high frequency. Students in this category tend to amass a large number of credits without making significant progress towards the completion of a degree. Their probabilities of being admitted into a select program are low. Students in this category generally need extensive career and educational counseling and assistance with goals clarification.

---

the College, it was possible to predict into what subpopulation a General Studies student would fall in an estimated 75% of the cases. These variables are shown in Figure II.

3. Because of the additional funding available to the College for students enrolled in career programs, the failure to place correctly students who preferred a program designation other than General Studies was costing the College over $300,000 per year. The results of the study clearly established that administrative procedures, not student choice, were resulting in at least 15% of the students being incorrectly placed in the General Studies Program.

4. General Studies students were much less likely to graduate than students in other programs. This was the apparent result of two circumstances: a higher probability of not being degree-oriented at the time of enrollment, and less involvement with program-related support services. For example, General Studies students usually did not have access to specifically identified academic advisors, special-interest student clubs and activities, or instructional spaces on campus that they could go to meet and interact with other students having similar interests.

5. General Studies students were less likely to take second-level courses than other students. General Studies students who did select second-level courses

FIGURE II

VARIABLES IDENTIFIED AS BEING SIGNIFICANT IN A DISCRIMINANT ANALYSIS APPROACH TO CLASSIFY STUDENTS INTO ONE OF THE FIVE GENERAL STUDIES SUBPOPULATIONS

Possible Entering Characteristics of Students in Various GSP Categories

Groups A and B - Goal-Directed, Academically Able

- Male student
- Resides in high SES zip code area
- Full-time employment
- Clear transfer goals
- Attended a parochial or private high school
- Top half of high school class
- Asian student
- High reading placement score
- High writing placement score
- Selected GSP as first program choice
- Enrolled to improve current job skills
- Academic as opposed to general or vocational high school program
- One or both parents attended college

Group C - Options Exploring, Academically Able

- Female student
- Resides in high SES zipcode area
- Goal uncertainty
- Older than median age
- Attended a parochial or private high school
- Top half of high school class
- Hispanic background
- Non-Asian
- Part-time employment or not employed
- Does not express transfer as a goal
- Not enrolled to improve existing job skills
- Moderate to high reading placement scores
- Moderate to high writing placement scores

Group D - Floundering

- Male student
- Resides in low SES zipcode area
- Hispanic background
- Non-white

FIGURE II (continued)

Group D - Floundering (continued)

Non-high school graduate
GED holder
Very definite goals that are unrealistic, or no clear goals
Younger than median age
Prefers a program other than GSP
Enrolls for "personal interest" reasons
Attended a public high school
Bottom half of high school class
Unemployed
Neither parent attended higher education
Reading and writing placement scores that barely qualify student for college-level studies

Group E - Aspiring Selective Program

Female student
Resides in low SES zipcode area
Non-Hispanic
Non-Asian
Black
Prefers a program other than GSP
Attended a public high school
Unemployed
Has dependents
Above median age
Enrolled for job preparation
Placement scores in reading and writing at low end of what is required for college-level work
Rejected in first program choice

---

typically were enrolled in career courses. The relative growth of General Studies students over time was related to relative decline in enrollments in a number of liberal arts disciplines and courses.

6. General Studies students were much more likely than students in other programs to leave without accomplishing their entering educational goals. Those who left without graduating completed 50% fewer credits than those who left without graduating from other programs.
7. General Studies students had lower grade point averages, higher withdrawal rates, and were more likely to be placed on academic probation or dropped for poor performance than students in other programs.
8. None of the differences from students in other programs in retention, graduation, or academic performance could be explained by entering abilities or demographic characteristics. However, there were significant differences in goal clarity and reasonableness of goals between General Studies students and student in other programs.
9. General Studies students expressed the same level of satisfaction with classroom instruction as did students in other programs, but were much less satisfied with academic and student support services.

In looking at student outcomes, both while at the College and in post-college experiences, the Group A and B students generally had experiences consistent with those in other programs at the College. In transferring, they lost fewer credits on the average (4.5) than students in other programs. They were equally likely to be employed - but less likely to report a relationship to their studies at the College. The Group C students had an above-average probability of being dropped for poor progress (too many course withdrawals), had more difficulty transferring and in finding employment, and a greater probability of reporting they had failed to achieve their educational goals. The Group D students had very high probabilities of being dropped for poor academic performance, almost never persisted until graduation, seldom transferred, and had subsequent employment experiences consistent with City residents not attending college. For most students in this group, it was questionable to what extent attendance at the College had been of any significant benefit. The Group E students were the most heterogeneous in their outcomes. Their retention rates were high - but so was the probability of being dropped for poor scholarship. Relatively few were eventually accepted into a select program, and some graduated having accomplished only the completion of a wide range of courses designed to prepare them for admission to a program that was never granted. A sizeable percentage were able to gain admission to their desired program upon transfer to a four-year school.

Implications for Institutional Change

The research team concluded that the results of the evaluation implied the need for the following types of institutional change:

1. Immediate steps should be taken to eliminate administrative procedures which resulted in students being placed in the General Studies Program when another program was more appropriate. This was important both because of the lost revenues, and the inadvertent exclusion of these students from a program environment in which there would routinely be more support.
2. A holistic assessment model for entering new students should be developed based in part upon the variables identified in Figure II. Starting with the entering-student profile variables, a counseling/advising session was recommended which would attempt to establish into which of the subpopulations a student was most likely to fall without appropriate assistance, and thus what kinds of support the student would require. While a statistical approach was developed which would have allowed each student to be tentatively classified based upon discriminant function scores, this approach was rejected as being too cumbersome and impersonal to be used. It was concluded that a trained professional's judgement after an interview and review of the student portfolio would result in a more acceptable placement approach.

3. Counseling services should move from a passive, as-requested service to a proactive, directed approach where students with unclear or unrealistic goals, as well as academically high-risk students, would be strongly encouraged to obtain the student and academic support services needed for their retention and academic success.

4. The academic advising approach should be refocused for General Studies students to pay greater attention to the clarification and development of goals with less emphasis on providing a course-selection service. This suggested a need to retrain advisors and provide for a closer collaboration of the advising and counseling staffs.

5. Without totally eliminating the opportunity for some students to use the General Studies Program to explore and establish academic interests and to create customized programs of study, the General Studies Program should be reshaped into a series of curricular clusters aligned with the major academic divisions of the College. This would make it easier for students to become involved with the students and staff of a particular division. It would help to insure that a coherent curriculum was followed. And, it would facilitate the inclusion of the student in co-curricular activities and provide an easy way to assign an advisor whose interests and expertise were consistent with the students' needs.

6. To augment the strengthened counseling and advising model, a mentoring program was recommended. This would afford the student an opportunity to develop an in-depth personal relationship with at least one staff member at the College.

7. Modifications to curricular requirements were recommended which would help to insure that critical courses such as English Composition were taken early in the students' program of study to avoid unnecessary problems with basic skills.

8. A data base change was recommended so that aspiring selective-program students could be flagged during their first semester for directive counseling and assistance to develop a plan for early acceptance or redirection of educational goals. At the same time, selective-program staff were urged to review admissions criteria to see if some students were arbitrarily and irrationally being excluded. Institutional research into the validity of access standards was encouraged.

9. Greater attention to improving the post-college outcomes of General Studies students was urged. Steps to insure access to job-readiness and job-search skills workshops were clearly needed. Better access to meaningful transfer planning information was suggested.

Employment of the Results to Affect Institutional Change

The findings clearly demonstrated to the research team that their worst expectations about the General Studies Program had been confirmed. For many students, the program was failing to provide a vehicle to achieve their personal and educational goals. While a significant percentage of the General Studies students were using the program successfully to accomplish meaningful career and educational goals, these students were in the minority of the total General Studies population. Furthermore, it appeared that the successful students could be identified at the time of enrollment, allowing interventions for the remainder of the students without eliminating the current curriculum for students who were being well served by it.

The challenge for the team was to present the findings in a way that would result in needed institutional change. The evaluation process had resulted in several important accomplishments:

1. By widespread involvement in the hypotheses development and research design phase, there was general awareness of the evaluation effort and interest in the outcome. Members of the research team had reported progress and preliminary findings intermittently to their constituents to help maintain this interest.
2. A significant number of staff had participated directly in the research effort and thus were in a position to support and endorse the findings.

However, this heightened interest was not sufficient to insure that the results would be broadly understood and ultimately used as a basis for change. To this end, a systematic approach for compiling and disseminating the results was developed. As a first step, a detailed 200-page research report was prepared. The expectation was not that the report would be generally read in its entirety - but that individuals interested in a particular issue raised by the evaluation could have easy access to the supporting research findings.

The report began with a 15-page summary which both detailed all major findings and provided a series of recommendations for institutional change. The recommendations were very specific and included suggestions for revised roles for many offices of the College. The inclusion of detailed specific recommendations for change went beyond the historical function of institutional research reports at the College. However, the research team concluded that the breadth of roles and perspectives of individuals involved in the evaluation project would make the recommendations credible, if not acceptable. Secondly, it was felt that change could be accelerated if discussion for change began within a proposed framework.

The next step taken was to try to insure that every faculty or administrator had an opportunity to hear an oral presentation of the findings at least once. A formal presentation was made to most committees and administrative groups having an interest in curricular issues at the College. A major three-hour presentation and discussion was held on a required faculty in-

service day. Department heads were invited to schedule a presentation of some aspect of the audit if it related to current one of their departmental issues.

From these discussions there emerged the following key critical issues to which all staff could relate to at least somewhat:

1. The College's general education goals and expectations for curricular coherence were not being achieved by many students in the program.
2. At a time of increasing funding pressure, the College was losing hundreds of thousands of dollars in tuition and state revenue through poor retention and inappropriate program codes for the General Studies students.
3. The College was failing to help a significant percentage of students achieve their educational goals, resulting not only in a disservice to the students involved, but potentially a very serious impact on the ability to recruit subsequent classes of students.
4. Consistent with the underlying theme of the National Institute of Education's 1984 report, Involvement in Learning, which was published shortly after the evaluation was completed, the General Studies students were not being integrated into the activities, programs and services of the College as well as the remainder of the students were. This lack of "involvement" appeared to relate to the students' lack of success.

Equally important, the evaluation process had identified likely approaches to begin to resolve the critical issues. The goal for every presentation made to College staff was to clearly suggest viable strategies that could be employed to strengthen the program.

Building upon the consensus which developed from the completion and dissemination of the audit findings, the President charged the Division Deans and Chief Academic Officer to serve as an institutional steering committee to develop a specific plan to implement the needed changes to the program.

The audit suggested that restructuring of the program should occur in the following major areas:

- Proactive counseling and advising at the time the student entered to insure entry into a combination of courses and services consistent with goals and abilities.
- Clearer definition of the College's general education expectations for students and the identification of instructional approaches to meet these goals.
- Development of curricular structures which would insure that reasonable combinations of courses were taken and that made it easy for the student to develop ties with faculty and become involved in meaningful co-curricular experiences.

The charge to the Deans was broken into these three components and planning for change was begun in each area. Among the specific changes which are currently taking place are:

- Redesign of the student data base and admissions data collection procedures to permit accurate collection, recording and on-line retrieval of the holistic assessment variables.
- Initiation of a student reception and multi-services center which will insure that new students without specific program interests have immediate access to a wide range of counseling and advising services and receive appropriate placement and follow-up.
- Establishment of a curriculum code validation process which insures that correct codes are assigned initially and current program codes reflect student interests and course selection patterns.
- Creation of a number of new General Studies curriculum models for experimental implementation.
- Clarification of institutional general education goals, identification and implementation of measurement strategies to provide a better understanding of general education gains.
- Strengthened advising and career placement services for General Studies students, including the employment of additional staff to provide specific services to the General Studies students.

Suggested Principles for Promoting Change Through Institutional Research

Although the final steps to complete the restructuring of the General Studies Program are still underway, sufficient

improvements have occurred to conclude that the original formative evaluation goals will be realized. The factors which resulted in this accomplishment suggest the following principles for producing institutional change through a formative evaluation.

1. Hypotheses formation and the research design should be based upon constituent input. It is difficult to ignore findings that reflect agreed-upon issues and measurement methodologies.
2. It is easier to reach institutional consensus on the nature of critical issues when the discussions are focused on student outcomes as opposed to discipline-specific issues. Past efforts to change the program had failed because they had begun with an emphasis on curricular, not student outcome, issues.
3. The evaluation process should be conducted in a way that allows appropriate institutional actions to be identified. An equal emphasis should be given to "why" an event occurred with "what" occurred. Knowing there is a problem without knowing why may not be adequate for producing change.
4. Research results should be reported in more than one mode. Reliance on technical, written research reports will not insure that key decision makers will be aware of, or accept, the results of the evaluation. Presentation of the results in group settings makes it more difficult for staff to reject the findings without

first having an opportunity for concerns and issues to be clarified.

5. Multiple research methodologies are more convincing than one. By including both qualitative and interview research techniques along with more standard questionnaire and data base approaches, the results become more meaningful for those prone to distrust the results of typical research studies. Even though the telephone interviews did not provide any important new information - they added immeasurably to the credibility of the results for individuals who did not understand multi-variate statistical procedures that were employed in other parts of the study.
6. If possible, expected users of the results should be involved in the validation of the findings. The study's credibility was enhanced because a number of the College's non-research staff had played central roles in establishing key study conclusions.
7. The "obvious" should be irrefutably documented. Many of the findings in the audit were not surprises - but reflected unsubstantiated beliefs that had not been acted upon because of a lack of proof. At the same time a number of institutional "beliefs" about the General Studies students were shown to be totally false.
8. The tendency to want to "over-complicate" the research methodology and presentation of results should be resisted. A few members of the research team wanted to

research in-depth a smaller subset of General Studies issues using a more controlled, "statistically pure" approach. This approach was rejected because it would fail to address some of the larger institutional issues and would create results that, while more "scientific", would be less meaningful to many of the institutional constituents. The goal was to paint a broad general picture with sufficient detail to provoke institutional change in the appropriate direction. Sub-issues which deserved more study, but were not fundamental to strengthening the program, were postponed. A good example of this was the approach used to look at general education. No attempt was made to measure actual general education competencies. Rather, variances in course-taking patterns were examined which suggested deficiencies in the student's backgrounds. Enough evidence was amassed to show that a strengthened general education program was required in several areas. Additional research is now underway to complement the detailed discussions on general education that are currently taking place.

9. The research findings should include specific suggestions for change. Because the collegiate decision-making environment tends to be innately conservative and reactionary with respect to institutional change, the initial recommendations may need to be fairly dramatic and possibly go beyond that

absolutely required to eliminate institutional deficiencies.

Recommendations by Other Researchers

Feasley (1980), in a review of writing on the use of evaluation data, noted the skepticism which many authors have had on the ability of evaluation data to make a difference. A critical difficulty with evaluation data frequently was their lack of timeliness to decision-makers. Feasley also argued that an awareness of who the decision-makers will be for instituting programmatic changes is crucial. The results should be presented in a way that is meaningful to those who must use them. Unnecessary recommendations which will be negatively received should be avoided. Results were recommended to be presented in multiple formats with each type of presentation being as self-contained as possible.

Poulton (cited in Feasley, 1980), in writing about effective evaluation strategies, urged that clearly defined roles for participants in the evaluation be developed which clarified the process for them and made it easier for them to support the findings. He also argued that the evaluation process should be developed in a way to promote a sense of fairness and candidness in how the results have been reported.

Kinnick (1985) identified a number of factors which would result in research data not being employed in institutional decision-making. These included:

- Lack of access to research data.
- Lack of an organizational structure to facilitate the collection and dissemination of the findings. No linkages between those gatherings and those expected to use the data.
- No incentives for the use of data.
- Failure to present results in a succinct manner that facilitated understanding.
- Perception that data lacks validity.
- Lack of reference or benchmark data to provide a basis for assessing the findings.

Kinnick argued that research findings focused on significant institutional problems tend to be more positively received, i.e., findings need to be clearly related to a perceived institutional issue. Kinnick also emphasizes the importance of concise, meaningful presentation of results.

Anderson and Ball (1978) noted that a number of writers have described organizational barriers to utilization of research results. These include "organizational conservatism", bureaucratic-induced inertia and "concern for possible consequences of change". Forces for self-perpetuation may be greater than those for change. Frequently, resistance to change is disguised by developing criticisms of the research methodologies. Furthermore, the institution may be unaccustomed to taking advice from those responsible for research efforts. Researchers may be viewed as remote and not able to relate to "line" issues.

Anderson and Ball emphasized the importance of the effective communication of results if the research is to influence organizational decision-making. They observe that "dissemination can take place without communication" (p. 92). Adequate communication requires the identification of those who should receive the information and the establishment of two-way communication with them in presenting the results so that opportunities to eliminate confusion and interpret the findings exist. Attention should be paid to defining all appropriate audiences to receive the results. The researchers should be prepared to serve as advocates for their findings. They also argue for timeliness, interim result reporting and the avoidance of methodological and presentation approaches that are more complex than necessary.

In a very real sense, these observations highlight the reasons why this research effort succeeded in producing organizational change. In fairness, it should also be stated that a critical condition for change - addressing in the research effort a broadly acknowledged institutional concern - did help in the successful application of the findings. But careful attention to the strategies used for research design, implementation and results presentation clearly contributed to the success of this effort.

BIBLIOGRAPHY

Anderson, S.B. and Ball, S. (1978). The profession and practice of program evaluation. San Francisco: Jossey-Bass.

Deshler, D. (1984). Reflections on evaluation decision making. In D. Deshler (Ed.) New Directions for Continuing Education: Evaluation for Program Improvement, 24, 97-103.

Ewell, P.T. (1985). Some implications for practice. In P.T. Ewell (Ed.) New Directions for Educational Research: Assessing Educational Outcomes, 47, 111-119.

Feasley, C.E. (1980). Program evaluation. (AAHE-ERIC/Higher Education Research Report No. 2). Washington, D.C.: American Association for Higher Education.

Hawk, T. and Grosset, J. (1984). General studies program audit. Unpublished manuscript.

Kinnick, M.K. (1985). Increasing the use of student outcomes information. In P.T. Ewell (Ed.) New Directions for Institutional Research: Assessing Educational Outcomes, 47, 111-119.

McClintock, C. (1984). Toward a theory of formative program evaluation. In D. Deshler (Ed.) New Directions for Continuing Education: Evaluation for Program Improvement, 24, 77-95.

Study Group of the Conditions of Excellence in American Higher Education (1984). Involvement in learning: realizing the potential of american higher education. Washington, D.C.: U.S. Department of Education, National Institute of Education.